Russian Mathematics 2016 vol.60 N7, pages 47-55

Automata transformations of prefix decidable and decidable by Buchi superwords

Korneeva N.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2016, Allerton Press, Inc.We show that the set of prefix decidable superwords is closed under finite automata and asynchronous automata transformations. We prove that structures of degrees of finite automata and asynchronous automata transformations contain an atom which consists of prefix decidable superwords with undecidable monadic theory (or undecidable by Buchi). Also we prove that the structure of degrees of asynchronous automata transformations contains an atom which consists of superwords with decidable monadic theory (decidable by Buchi).

http://dx.doi.org/10.3103/S1066369X16070070

Keywords

atom, automata transformation, decidability by Buchi, degrees, monadic theory, prefix decidability, superword